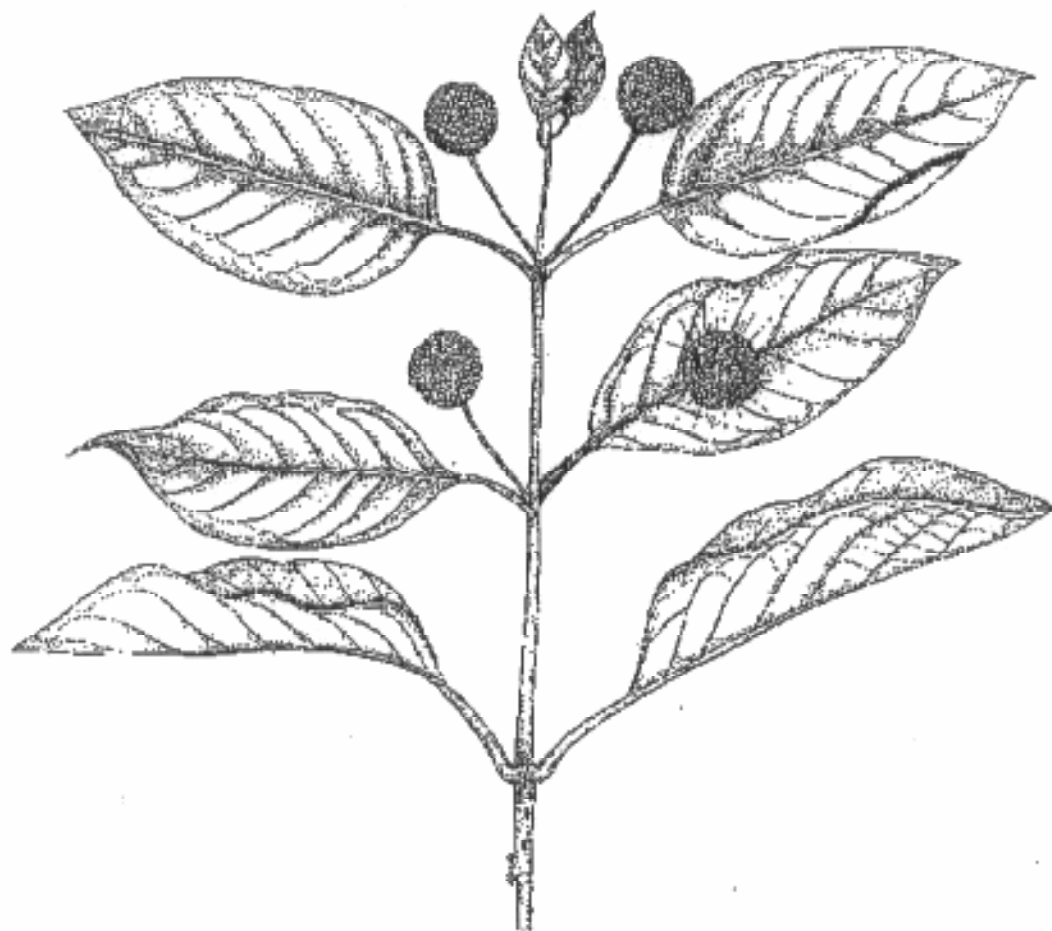


# Planting Guidelines: Choosing the Appropriate Trees, Shrubs, Herbs, and Seeds to Plant in Our Parks



*Cephalanthus occidentalis*  
Buttonbush



North Carolina Division of Parks and Recreation  
Department of Environment and Natural Resources

# Planting Guidelines: Choosing the Appropriate Trees, Shrubs, and Herbs to Plant in Our Parks

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## ACKNOWLEDGMENTS

The format and content of these guidelines were heavily influenced by the Tennessee Exotic Pest Plant Council's *Landscaping with Native Plants* brochures as well as the Virginia Department of Conservation and Recreation and Virginia Native Plant Society's *Native Plants for Conservation, Restoration and Landscaping - Master List*. These works are excellent sources of information on native plants.

I wish to thank Johnny Randall, North Carolina Botanical Garden; Harry LeGrand and Jame Amoroso, North Carolina Natural Heritage Program; and other staff with the North Carolina Division of Parks and Recreation, who took the time to thoughtfully review this document.

# PLANTING GUIDELINES

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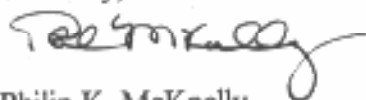
**1.0 DIRECTOR'S STATEMENT**

Our state parks provide a showcase for the natural diversity of plants found in North Carolina. We have the opportunity to enhance this natural heritage by choosing only native species for our landscaping and restoration projects. In addition, as park managers, we have the responsibility to not allow the introduction of invasive non-native plant species that could sacrifice the ecological integrity of these important public lands.

The following Planting Guidelines provide a list of common plant species that in the proper region and habitat are appropriate to use in our parks. The extensive length of this list clearly shows that there are innumerable native alternatives to the commonly used hybrids and exotic species. The list of sources of native plants and seeds provides a good distribution of suppliers throughout the state and should continue to grow as the movement toward using native species for landscaping continues to gain momentum.

The Division of Parks and Recreation is in the position to set the example for North Carolina with this policy of using only native species for landscaping and restoration projects. With this policy, we not only plant species that provide food and shelter for native wildlife, but most important, we promote the concept of biodiversity and good stewardship of our precious land and water.

Sincerely,



Philip K. McKnelly  
Director

Guideline: 31	Title:	Section: <u>2.0</u>
Originator: <u>Smith</u>	<u>PLANTING GUIDELINES</u>	Page: <u>1 of 1</u>
		Date: <u>November 1, 1998</u>

2.0

## INTRODUCTION AND POLICY STATEMENT

The emphasis of good stewardship in our parks often focuses on preventing or minimizing the destruction of our valuable native plant life. It is equally as important for us to be aware of what plants we introduce into our boundaries. This issue has come to the forefront in recent years as we build new facilities and are planting for a variety of purposes including soil stabilization and landscaping.

As park managers, it is our responsibility to use native plants to maintain the regional landscape character within our boundaries. By using native vegetation, the parks remain a showcase for the natural diversity found in the state, and we avoid introducing an exotic species that could become invasive and disruptive. The only exception to this principle involves the use of seeds for soil stabilization. In this case, there may not be native species that are commercially available and that provide prompt stabilization. For this purpose non-native seeds may be used as long as they do not exhibit invasive characteristics.

It is, therefore, the policy of the North Carolina state parks system to plant only native species for landscaping and restoration projects. Non-native seeds may be planted for soil stabilization as long as the particular species will not invade the natural areas of our parks. These guidelines provide lists of plant species (both plants and seeds) that are appropriate for use in the parks. Species other than those listed in these guidelines will be planted in the parks only after consultation with the Resource Management Program.

### 3.0 DEFINITION OF NATIVE PLANTS

Native plants are those that occur and have evolved in a region naturally without human intervention or manipulation. Since plants evolve over geologic time in response to the physical and biotic processes characteristic of a region, native plants possess certain traits that make them uniquely adapted to local conditions, providing a practical and ecologically valuable alternative for landscaping. Native plants are also generally defined as plants that occurred in North America before European settlement. This distinction is made because of the large-scale changes in the flora that have resulted since European settlement and the introduction of exotic plants.

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#### 4.0 **BENEFITS OF NATIVE PLANTS**

- ★ Promote biodiversity and environmental stewardship.
- ★ Provide food and shelter for native wildlife.
- ★ Adapted to local weather and soil conditions and generally require less maintenance.
- ★ Usually more resistant to local pest populations.
- ★ Generally require fewer pesticides and fertilizers because of natural adaptations.



## 5.0 NATIVE PLANT LIST

This document identifies native plant species for landscaping and restoration projects in the parks. This list provides a selection of plant choices adapted to growing conditions in North Carolina, focusing on those native species currently available in the nursery trade. The information on native regions, light requirements, and moisture requirements on this list is meant as general guidance. More detailed information should be consulted when it is necessary to determine if a species is native to the particular region of a park and is adapted to site-specific conditions.

For the most part, relatively common species have been included on the list. Rare species were left off the list in order to protect the genetic integrity of naturally occurring populations of rare species and avoid the collection of rare plants. Rare species are defined as those species listed by the Natural Heritage Program as Endangered, Threatened, Special Concern, Candidate, or Significantly Rare. There may be instances where park staff would like to use a rare plant species that occurs naturally in the park for a native garden display. In this case, park staff should work with a local nursery to propagate native material to use in this display. Use of rare species for this and any other purpose should include consultation on a case-by-case basis with the Resource Management Program.

## 6.0

**SEEDS FOR SOIL STABILIZATION**

The following species of grasses are approved for use in our state parks for soil stabilization and around buildings where lawns are desired. The majority of these species are by necessity not native to North Carolina. At present, there are only a few species of native grasses useful for erosion control that are commercially available. Grass seed can be mixed with native wildflower seeds for soil stabilization in less managed areas where a landscape with more color and texture is preferred.

***Festuca arundinacea* (Tall Fescue)**

Tall fescue is a perennial, cool-season, deeply rooted bunch grass that is used for stabilizing slopes and road banks as well as for lawns. It is a robust and strongly competitive plant that remains green all year except in midsummer months. Tall fescue grows in low-fertility, acid, clayey, loamy, and sandy soils. It has good drought tolerance, fair shade tolerance, and tolerates soils that are relatively poorly drained.

***Festuca ovina var. duriuscula* (Hard Fescue)**

Hard fescue is an excellent perennial grass for roadway vegetation since its low growth habit requires less mowing during the growing season. It is also a good companion grass for wildflower and tree seedling plantings.

***Festuca rubra* (Creeping Red Fescue)**

As its name implies, creeping red fescue has a rhizomatous growth habit. This cool season, perennial grass is used in turf grass mixtures for the mountains and piedmont. It is adapted for shade, traffic, and flooding.

***Festuca rubra var. commutata* (Chewings Red Fescue)**

Chewings red fescue has similar characteristics to creeping red fescue.

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### ***Hordeum spp.* (Barley)**

A number of species of barley can be used for soil stabilization. Barley is a cool season, annual grass that when moisture is available will germinate in the fall, stay green during the winter, and then die in the spring as competition from warm season plants increases.

### ***Pennisetum glaucum* (Brown Top or Pearl Millet)**

This fast-growing, robust, annual grass exhibits good drought tolerance which makes this species an important warm season option for soil stabilization.

### ***Phalaris arundinacea* (Reed Canarygrass)**

A native to North Carolina, this perennial cool season grass is used for the stabilization of pond shorelines, drainage ditches, and streambanks in the mountains and western piedmont. It is established by planting freshly cut stem slips or rhizome fragments.

### ***Poa pratensis* (Kentucky Bluegrass)**

Kentucky bluegrass is a dense, sod-forming, long-lived perennial grass used extensively in lawns and slopes. It is best adapted to well drained, fertile soils with a pH of 6.0 to 6.5. This drought tolerant grass will grow as long as the ground is not frozen. It prefers sunlight but also does well in light shade. Kentucky bluegrass is usually used in a mixture with other grasses.

### ***Secale cereale* (Winter Rye or Rye Grain)**

Winter rye is a cold-hardy annual grass that will germinate and grow at low temperatures. By maturing early, it offers less competition during the late spring period, a critical time in the establishment of perennial species. Winter rye germinates quickly and is tolerant of poor soils.

***Sorghum bicolor* (Sudangrass)**

Only the small-stemmed varieties of this annual warm season grass should be used. Sudangrass is useful for temporary seeding, and it is adapted to soils relatively high in clay content. Seed for common Sudangrass is not always available, but other small-stemmed types may be used, such as the hybrid Trudan. The coarse-stemmed Sorghum-Sudangrass hybrids are not appropriate for erosion control.

***Stenotaphrum secundatum* (St. Augustinegrass)**

This native, warm season, perennial grass is used for turf in the coastal plain and southern piedmont. St. Augustinegrass is adapted to sun, shade, and salt spray, but is not cold hardy. It is propagated vegetatively and, therefore, is planted as sod or in plugs.

## 7.0

**SUPPLIERS OF NATIVE PLANTS AND SEEDS**

Note: The following lists those nurseries and seed suppliers that supply native plant material. Inclusion on this list is not meant to imply that these businesses do not also offer non-native plant material. For this reason, it is always important to specify the scientific name of a plant (genus and specific epithet) when purchasing any plants or seeds. This listing does not constitute an endorsement.

Applewood Seed Co.  
5380 Vivian St.  
Arvada, CO 80002  
303-431-7333

Greensboro Shrub Nursery  
4514 Burlington Rd.  
Greensboro, NC 27405  
1-800-849-4514 or 910-621-6579

Boothe Hill Wildflowers  
921 Boothe Hill  
Chapel Hill, NC 27514  
919-967-4091  
(native grass seed also available)

Laurel Springs Nursery  
401 Regal Street  
Hendersonville, NC 28792  
828-692-4012

Cure Nursery  
880 Buteo Road  
Pittsboro, NC 27312  
919-542-6186

Niche Gardens  
1111 Dawson Rd.  
Chapel Hill, NC 27516  
919-967-0078

Ernst Conservation Seeds  
9006 Mercer Pike  
Meadville, PA 16335  
814-425-7276  
(native wildflower and grass seeds)

Sharp Bros. Seed Co.  
396 SW Davis -LaDue  
Clinton, MO 64735  
816-885-7551  
(native wildflower and grass seeds)

Garrett Wildflower Seed Farm  
1117 New Castle Court  
Raleigh, NC 27603  
919-662-9751

Wa Ya Nursery & Tree Farm  
11199 Canada Rd.  
Tuckasegee, NC 28783  
828-293-5720

**SUPPLIERS OF NATIVE PLANTS AND SEEDS (CONTINUED)**

We-Du Nurseries  
Rt. 5, Box 724  
Marion, NC 28752  
828-738-8300

Woodlanders, Inc.  
1128 Colleton Ave.  
Aiken, SC 29801  
803-648-7522

For more information about suppliers of native plants contact:

'Native Plant Sources'  
North Carolina Botanical Garden  
University of North Carolina at Chapel Hill  
CB 3375, Totten Center  
Chapel Hill, NC 27599-3375  
919-962-0522

## 8.0

## MASTER LIST OF NATIVE PLANTS

## Native Regions

M= Mountains

P= Piedmont

C= Coastal Plain

## Light Requirements

S= Shade

P= Partial sun

F= Full sun

## Moisture Requirements

L= Low moisture

M= Moderate moisture

H= High moisture

A= Aquatic

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<b>Medium to Large Trees</b>											
<i>Acer barbatum</i>	Southern sugar maple		X	X	X	X			X		
<i>Acer rubrum</i>	red maple	X	X	X	X	X	X		X	X	
<i>Acer saccharinum</i>	silver maple		X		X	X	X		X		
<i>Acer saccharum</i>	sugar maple	X				X	X		X		
<i>Betula alleghaniensis</i>	yellow birch	X			X	X			X		
<i>Betula lenta</i>	cherry birch, sweet birch	X			X	X			X		
<i>Betula nigra</i>	river birch	X	X	X		X	X		X	X	
<i>Carya cordiformis</i>	bitternut hickory	X	X	X	X	X			X		

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Carya glabra</i>	pignut hickory	X	X	X	X	X		X	X		
<i>Carya ovata</i>	shagbark hickory	X	X		X	X			X		
<i>Carya tomentosa</i>	mockernut hickory	X	X	X	X	X		X	X		
<i>Celtis laevigata</i>	sugarberry, hackberry		X	X	X	X			X		
<i>Chamaecyparis thyoides</i>	Atlantic white cedar			X		X	X		X	X	
<i>Cladrastis kentuckea</i>	yellowwood	X			X	X			X		
<i>Diospyros virginiana</i>	persimmon	X	X	X	X	X	X	X	X		
<i>Fagus grandifolia</i>	American beech	X	X	X	X	X			X		
<i>Fraxinus americana</i>	white ash	X	X	X	X	X			X		
<i>Fraxinus pennsylvanica</i>	green ash	X	X	X	X	X			X	X	
<i>Juglans nigra</i>	black walnut	X	X	X	X	X			X		
<i>Liquidambar styraciflua</i>	sweetgum	X	X	X	X	X	X		X	X	
<i>Liriodendron tulipifera</i>	tulip poplar, yellow poplar	X	X	X	X	X	X		X		
<i>Magnolia acuminata</i>	cucumber magnolia	X	X		X	X			X		
<i>Nyssa aquatica</i>	water tupelo			X	X	X				X	
<i>Nyssa sylvatica</i>	black gum	X	X	X	X	X	X	X	X		
<i>Nyssa sylvatica</i> var. <i>biflora</i>	swamp black gum, swamp tupelo			X	X	X	X			X	
<i>Oxydendrum arboreum</i>	sourwood	X	X	X		X	X	X	X		
<i>Picea rubens</i>	red spruce	X			X	X	X		X		
<i>Pinus echinata</i>	shortleaf pine	X	X	X		X	X	X			



Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Pinus palustris</i>	longleaf pine		X	X			X	X	X		
<i>Pinus rigida</i>	pitch pine	X					X	X			
<i>Pinus serotina</i>	pond pine			X			X		X	X	
<i>Pinus strobus</i>	white pine	X	X			X	X		X		
<i>Pinus taeda</i>	loblolly pine		X	X			X	X	X	X	
<i>Pinus virginiana</i>	Virginia pine	X	X				X	X			
<i>Platanus occidentalis</i>	sycamore	X	X	X		X	X		X	X	
<i>Prunus serotina</i>	black cherry	X	X	X	X	X	X	X	X		
<i>Quercus alba</i>	white oak	X	X	X		X	X	X	X		
<i>Quercus bicolor</i>	swamp white oak		X		X	X				X	
<i>Quercus coccinea</i>	scarlet oak	X	X		X	X		X			
<i>Quercus falcata</i>	Southern red oak	X	X	X	X	X		X	X		
<i>Quercus falcata</i> var. <i>pagodaefolia</i>	cherrybark oak		X	X	X	X			X	X	
<i>Quercus laurifolia</i>	laurel oak			X	X	X	X		X	X	
<i>Quercus lyrata</i>	overcup oak		X	X	X	X				X	
<i>Quercus margaretta</i>	sand post oak			X		X	X	X			
<i>Quercus marilandica</i>	black jack oak	X	X	X	X	X		X			
<i>Quercus michauxii</i>	swamp chestnut oak		X	X	X	X				X	
<i>Quercus nigra</i>	water oak		X	X	X	X		X	X		
<i>Quercus phellos</i>	willow oak		X	X	X	X			X	X	
<i>Quercus prinus</i>	chestnut oak	X	X		X	X		X			

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Quercus rubra</i>	Northern red oak	X	X		X	X		X	X		
<i>Quercus shumardii</i>	shumard oak		X	X	X	X			X	X	
<i>Quercus stellata</i>	post oak	X	X	X	X	X		X			
<i>Quercus velutina</i>	black oak	X	X	X	X	X		X			
<i>Quercus virginiana</i>	live oak			X		X	X	X			
<i>Robinia pseudoacacia</i>	black locust	X	X			X	X		X		
<i>Taxodium distichum</i>	baldcypress			X		X	X				X
<i>Tilia americana</i> var. <i>heterophylla</i>	basswood	X	X		X	X			X		
<i>Tsuga canadensis</i>	Eastern hemlock	X	X		X	X	X		X		
<i>Tsuga caroliniana</i>	Carolina hemlock	X	X			X	X	X			
<i>Ulmus alata</i>	winged elm		X	X	X	X	X	X	X		
<i>Ulmus americana</i>	American elm	X	X	X	X	X			X		
<b>Small Trees</b>											
<i>Amelanchier arborea</i>	downy serviceberry, shadbush	X	X	X	X	X			X		
<i>Amelanchier canadensis</i>	Canada serviceberry			X			X		X	X	
<i>Amelanchier laevis</i>	smooth serviceberry	X				X	X	X	X		
<i>Asimina triloba</i>	pawpaw	X	X	X	X	X			X		
<i>Carpinus caroliniana</i>	ironwood, American hornbeam	X	X	X	X	X			X	X	
<i>Cercis canadensis</i>	eastern redbud	X	X	X	X	X			X		

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Chionanthus virginicus</i>	white fringetree, old man's beard	X	X	X		X	X		X		
<i>Cornus alternifolia</i>	alternate-leaf dogwood	X			X	X			X		
<i>Cornus florida</i>	flowering dogwood	X	X	X	X	X		X	X		
<i>Crateagus crus-galli</i>	cockspur hawthorn	X	X	X		X	X	X	X		
<i>Crateagus flava</i>	October haw	X	X	X		X	X		X		
<i>Cyrilla racemiflora</i>	titi			X		X	X		X	X	
<i>Fraxinus caroliniana</i>	water ash			X	X	X				X	
<i>Gordonia lasianthus</i>	loblolly bay			X	X	X	X		X	X	
<i>Halesia tetraptera (H. carolina)</i>	common silverbell	X	X		X	X			X		
<i>Ilex opaca</i>	American holly	X	X	X	X	X		X	X	X	
<i>Juniperus virginiana</i>	Eastern red cedar	X	X	X		X	X	X	X		
<i>Magnolia tripetala</i>	umbrella tree	X	X		X				X		
<i>Magnolia virginiana</i>	sweetbay magnolia		X	X	X	X			X	X	
<i>Morus rubra</i>	red mulberry	X	X	X	X	X			X		
<i>Osmanthus americana</i>	wild olive, devilwood			X	X	X			X		
<i>Ostrya virginiana</i>	Eastern hop-hornbeam	X	X		X	X			X		
<i>Persea borbonia</i>	red bay			X	X	X			X	X	
<i>Persea palustris</i>	swamp bay			X	X	X			X	X	
<i>Pinus pungens</i>	table mountain pine	X					X	X			
<i>Prunus americana</i>	American wild plum	X	X			X			X		

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Prunus caroliniana</i>	Carolina laurel-cherry			X		X	X	X	X		
<i>Quercus incana</i>	bluejack oak			X		X	X	X			
<i>Quercus laevis</i>	turkey oak			X		X	X	X			
<i>Rhus glabra</i>	smooth sumac	X	X				X	X	X		
<i>Rhus hirta (Rhus typhina)</i>	staghorn sumac	X					X	X			
<i>Salix caroliniana</i>	swamp willow	X	X	X		X	X		X	X	
<i>Salix nigra</i>	black willow	X	X	X		X	X		X	X	
<i>Sassafras albidum</i>	sassafras	X	X	X		X	X	X	X		
<i>Staphylea trifolia</i>	bladdernut		X		X				X	X	
<i>Symplocos tinctoria</i>	horse-sugar, sweetleaf	X	X	X	X	X		X	X		
<i>Ulmus rubra</i>	slippery elm	X	X		X	X			X		
<b>Shrubs</b>											
<i>Aesculus sylvatica</i>	painted buckeye	X	X		X	X			X		
<i>Alnus serrulata</i>	common alder	X	X	X	X	X	X				X
<i>Aronia arbutifolia</i>	red chokeberry	X	X	X	X	X			X	X	
<i>Baccharis halimifolia</i>	silverling		X	X			X	X	X	X	
<i>Callicarpa americana</i>	American beautyberry		X	X	X	X			X		
<i>Calycanthus floridus</i>	sweet-shrub	X	X		X	X			X		
<i>Castanea pumila</i>	Allegheny chinkapin	X	X	X	X	X	X	X			
<i>Ceanothus americanus</i>	New Jersey tea	X	X	X		X	X	X			



Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Cephalanthus occidentalis</i>	buttonbush	X	X	X		X	X				X
<i>Clethra acuminata</i>	mountain sweet pepperbush	X			X	X			X		
<i>Clethra alnifolia</i>	sweet pepperbush			X	X	X			X	X	
<i>Comptonia peregrina</i>	sweet fern	X	X			X	X				
<i>Cornus amomum</i>	silky dogwood	X	X	X	X	X					X
<i>Cornus stricta</i>	swamp dogwood			X	X	X				X	
<i>Corylus americana</i>	American hazel, hazelnut	X	X		X	X			X		
<i>Euonymus americanus</i>	hearts-a-bustin', strawberry bush	X	X	X	X	X		X	X		
<i>Gaylussacia frondosa</i>	dangleberry			X	X	X	X		X	X	
<i>Hamamelis virginiana</i>	witch hazel	X	X	X	X	X		X	X		
<i>Hydrangea arborescens</i>	wild hydrangea	X	X		X	X			X		
<i>Ilex coriacea</i>	gallberry			X	X	X			X	X	
<i>Ilex decidua</i>	deciduous holly, possumhaw		X	X	X	X			X		
<i>Ilex glabra</i>	inkberry			X	X	X			X	X	
<i>Ilex verticillata</i>	winterberry	X	X	X	X	X			X	X	
<i>Ilex vomitoria</i>	yaupon holly			X	X	X	X	X			
<i>Itea virginica</i>	Virginia willow		X	X	X	X				X	
<i>Kalmia carolina</i>	lamb-kill, sheep-kill			X		X	X		X	X	
<i>Kalmia latifolia</i>	mountain laurel	X	X		X	X		X	X		
<i>Leucothoe axillaris</i>	coastal dog-hobble			X	X	X			X		

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Leucothoe fontanesiana</i>	dog-hobble	X	X		X				X		
<i>Leucothoe racemosa</i>	fetterbush		X	X	X	X			X	X	
<i>Lindera benzoin</i>	spicebush	X	X	X	X				X		
<i>Lyonia ligustrina</i>	northern maleberry	X	X			X			X	X	
<i>Lyonia lucida</i>	shining fetterbush			X	X	X			X		
<i>Myrica cerifera</i>	Southern wax-myrtle		X	X	X	X	X	X	X	X	
<i>Myrica cerifera</i> var. <i>pumila</i>	dwarf Southern wax-myrtle			X		X	X	X	X		
<i>Myrica heterophylla</i>	bayberry, evergreen bayberry			X	X	X			X		
<i>Pieris floribunda</i>	evergreen mountain fetterbush	X					X	X	X		
<i>Rhododendron atlanticum</i>	dwarf azalea			X		X			X		
<i>Rhododendron calendulaceum</i>	flame azalea	X			X	X			X		
<i>Rhododendron catawbiense</i>	Catawba rhododendron	X	X		X	X	X	X	X		
<i>Rhododendron maximum</i>	rosebay rhododendron, great laurel	X	X		X	X		X	X		
<i>Rhododendron periclymenoides</i>	pinxter flower, wild azalea	X	X	X	X	X			X		
<i>Rhododendron viscosum</i>	swamp azalea	X		X		X	X		X	X	
<i>Rhus copallina</i>	winged sumac	X	X	X		X	X	X	X		
<i>Rosa carolina</i>	pasture rose, Carolina rose	X	X	X		X	X	X	X		
<i>Rosa palustris</i>	swamp rose	X	X	X		X	X				X
<i>Rubus allegheniensis</i>	Alleghany blackberry	X	X				X	X			
<i>Rubus odoratus</i>	purple flowering raspberry	X				X			X		

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Salix humilis</i>	prairie willow	X	X				X	X			
<i>Salix sericea</i>	silky willow	X	X	X		X	X				X
<i>Sambucus canadensis</i>	common elderberry	X	X	X			X		X	X	
<i>Spiraea alba</i>	narrow-leaved meadowsweet	X					X		X		
<i>Spiraea latifolia</i>	broad-leaved meadowsweet	X					X		X		
<i>Styrax grandifolia</i>	bigleaf snowbell		X	X	X	X			X		
<i>Vaccinium arboreum</i>	sparkleberry		X	X	X	X		X	X		
<i>Vaccinium corymbosum</i>	highbush blueberry	X	X	X	X	X	X	X	X	X	
<i>Viburnum acerifolium</i>	maple-leaf viburnum	X	X		X	X		X	X		
<i>Viburnum dentatum</i>	Southern arrowwood viburnum	X	X	X	X	X			X		
<i>Viburnum nudum</i>	possumhaw viburnum	X	X	X	X	X				X	
<i>Viburnum prunifolium</i>	blackhaw viburnum	X	X	X	X	X			X		
<i>Viburnum rafinesquianum</i>	downy arrowwood		X		X	X			X		
<i>Viburnum rufidulum</i>	rusty blackhaw		X	X	X	X		X			
<i>Xanthorhiza simplicissima</i>	yellowroot	X	X	X	X			X	X		
<b>Vines</b>											
<i>Berchemia scandens</i>	rattan vine, supplejack			X	X	X			X	X	
<i>Bignonia capreolata</i>	crossvine		X	X	X	X			X	X	
<i>Clematis virginiana</i>	virgin's bower	X	X			X	X		X		

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Decumaria barbara</i>	climbing hydrangea	X		X	X				X	X	
<i>Gelsemium sempervirens</i>	Carolina jessamine		X	X	X	X	X	X	X		
<i>Lonicera sempervirens</i>	trumpet honeysuckle		X	X		X			X		
<i>Mikania scandens</i>	climbing hempweed		X	X		X	X		X	X	
<i>Parthenocissus quinquefolia</i> *	Virginia creeper	X	X	X		X	X	X	X		
<i>Vitis rotundifolia</i> *	muscadine grape	X	X	X		X	X	X	X		
<i>Wisteria frutescens</i> *	Atlantic wisteria			X		X	X		X	X	
<b>Herbs</b>											
<i>Actaea pachypoda</i>	white baneberry, doll's-eyes	X			X				X		
<i>Amsonia tabernaemontana</i>	blue star		X	X	X	X			X		
<i>Anemone quinquefolia</i>	wood anemone	X			X				X		
<i>Anemone virginiana</i>	thimbleweed	X	X			X			X		
<i>Anemonella thalictroides</i>	rue anemone, windflower	X	X		X				X		
<i>Antennaria neglecta</i>	field pussytoes	X	X			X	X	X	X		
<i>Aquilegia canadensis</i>	wild columbine	X	X	X	X	X			X		
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	X	X	X	X				X		
<i>Aruncus dioicus</i>	goat's-beard	X	X		X	X			X		
<i>Asarum canadense</i>	wild ginger	X	X		X				X		
<i>Asclepias incarnata</i>	swamp milkweed	X	X				X				X
<i>Asclepias syriaca</i>	common milkweed	X	X				X	X	X		



Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Asclepias tuberosa</i>	butterflyweed	X	X	X			X	X			
<i>Aster concolor</i>	Eastern silvery aster		X	X			X	X			
<i>Aster cordifolius</i>	heart-leaved aster	X	X		X	X	X		X		
<i>Aster divaricatus</i>	white wood aster	X	X		X	X	X	X	X		
<i>Aster grandiflorus</i>	large-flowered aster		X				X	X			
<i>Aster linariifolius</i>	stiff-leaved aster	X	X	X			X	X			
<i>Aster novae-angliae</i>	New England aster	X					X		X	X	
<i>Aster novi-belgii</i>	New York aster			X		X	X		X	X	
<i>Aster pilosus</i>	white heath aster, field aster	X	X	X			X	X	X		
<i>Aster umbellatus</i>	flat-top white aster	X				X	X				X
<i>Baptisia alba</i>	white wild-indigo		X			X	X	X			
<i>Baptisia cinerea</i>	Carolina wild indigo			X		X	X	X			
<i>Baptisia tinctoria</i>	yellow wild-indigo	X	X	X		X	X	X			
<i>Bidens aristosa</i>	bur marigold		X	X			X		X		
<i>Bidens cernua</i>	nodding beggar-ticks	X				X	X	X	X	X	
<i>Cassia marilandica</i>	wild senna	X	X			X		X	X		
<i>Chelone glabra</i>	white turtlehead	X	X	X	X	X					X
<i>Chrysogonum virginianum</i>	green-and-gold		X	X	X	X			X		
<i>Cimicifuga racemosa</i>	black cohosh	X	X		X	X			X		
<i>Clitoria centrosema</i>	spurred butterfly pea	X	X	X	X	X		X			
<i>Clitoria mariana</i>	Maryland butterfly pea	X	X	X	X	X		X			

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Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Convallaria montana</i>	American lily-of-the-valley	X			X	X			X		
<i>Coreopsis auriculata</i>	coreopsis		X		X	X			X		
<i>Coreopsis lanceolata</i>	lance-leaved coreopsis		X	X		X	X	X	X		
<i>Coreopsis tripteris</i>	tall coreopsis	X	X			X	X		X		
<i>Delphinium tricornis</i>	dwarf larkspur	X	X		X				X		
<i>Dicentra cucullaria</i>	Dutchman's breeches	X	X		X				X		
<i>Dracocephalum virginianum</i>	obedient plant	X	X			X	X		X		
<i>Equisetum hyemale</i>	scouring rush	X	X		X	X	X		X	X	
<i>Eupatorium coelestinum</i>	mistflower		X	X	X	X	X		X		
<i>Eupatorium fistulosum</i>	Joe-Pye-weed	X	X	X		X	X		X		
<i>Eupatorium perfoliatum</i>	boneset	X	X	X		X	X		X	X	
<i>Fragaria virginiana</i>	wild strawberry	X	X				X	X	X		
<i>Gentiana saponaria</i>	soapwort gentian	X	X	X	X					X	
<i>Geranium maculatum</i>	wild geranium	X	X		X	X			X		
<i>Gillenia trifoliata</i>	bowman's root	X	X		X	X			X		
<i>Helenium autumnale</i>	sneezeweed	X	X	X		X	X		X	X	
<i>Helianthus angustifolius</i>	narrow-leaf sunflower			X		X	X		X	X	
<i>Helianthus decapetalus</i>	ten-petaled sunflower	X	X		X	X			X		
<i>Helianthus divaricatus</i>	woodland sunflower	X	X			X		X			
<i>Heliopsis helianthoides</i>	ox-eye sunflower	X	X			X	X		X		
<i>Hepatica acutiloba</i>	sharp-lobed hepatica	X			X			X	X		

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Hepatica americana</i>	round-lobed hepatica		X		X				X		
<i>Heterotheca mariana</i>	Maryland golden aster	X	X	X		X	X	X			
<i>Heuchera americana</i>	alumroot		X	X	X			X	X		
<i>Hexastylis arifolia</i>	wild ginger, hearleaf	X	X	X	X	X		X	X		
<i>Hibiscus militaris</i>	Halbeard-leaved marsh mallow			X			X				X
<i>Hibiscus moscheutos</i>	rose mallow	X	X	X			X				X
<i>Impatiens capensis</i>	spotted touch-me-not, jewel-weed	X	X	X	X	X				X	
<i>Iris cristata</i>	dwarf crested iris	X	X		X	X			X		
<i>Iris virginica</i>	blue flag iris	X		X		X	X				X
<i>Kosteletskyia virginica</i>	seashore mallow			X			X				X
<i>Lespedeza capitata</i>	round-head bush clover		X	X			X	X			
<i>Liatris graminifolia</i>	grass-leaf blazing star	X	X	X		X	X	X	X		
<i>Liatris spicata</i>	spiked blazing star	X		X		X	X		X		
<i>Liatris squarrosa</i>	plains blazing star		X			X	X		X		
<i>Lilium michauxii</i>	Carolina lily	X	X	X	X	X		X	X		
<i>Lilium superbum</i>	Turk's-cap lily	X			X	X			X	X	
<i>Lobelia cardinalis</i>	cardinal flower	X	X	X		X	X				X
<i>Lobelia siphilitica</i>	great blue lobelia	X				X					X
<i>Lupinus perennis</i>	lupine			X		X	X	X			
<i>Mimulus ringens</i>	monkeyflower	X	X			X	X			X	

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Monarda didyma</i>	bee balm, Oswego tea	X			X	X			X	X	
<i>Monarda fistulosa</i>	wild bergamot	X	X			X	X		X		
<i>Nymphaea odorata</i>	American water lily	X	X	X			X				X
<i>Oenothera fruticosa</i>	sundrops	X	X	X		X	X	X	X		
<i>Opuntia compressa</i>	Eastern prickly-pear		X	X			X	X			
<i>Packera aurea</i>	golden ragwort	X	X		X	X			X	X	
<i>Peltandra virginica</i>	arrow arum		X	X		X	X				X
<i>Penstemon laevigatus</i>	smooth beardtongue		X	X		X	X		X		
<i>Penstemon smallii</i>	beardtongue	X				X	X	X	X		
<i>Phlox carolina</i>	thick-leaved phlox, Carolina phlox	X	X			X	X	X	X		
<i>Phlox divaricata</i>	blue phlox	X			X	X			X		
<i>Phlox glaberrima</i> var. <i>triflora</i>	smooth phlox	X				X	X		X		
<i>Phlox paniculata</i>	summer phlox	X	X			X	X		X		
<i>Phlox stolonifera</i>	creeping phlox	X			X	X			X		
<i>Podophyllum peltatum</i>	mayapple	X	X	X	X	X			X		
<i>Polygonatum biflorum</i>	Solomon's seal	X	X	X	X	X			X		
<i>Pontederia cordata</i>	pickerelweed		X	X			X				X
<i>Pycnanthemum incanum</i>	hoary mountain-mint	X	X	X		X		X	X		
<i>Pycnanthemum tenuifolium</i>	narrow-leaved mountain-mint	X	X	X		X	X	X	X		
<i>Rhexia virginica</i>	Virginia meadow-beauty	X	X	X			X			X	



Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Rudbeckia fulgida</i>	common eastern coneflower		X			X	X	X	X		
<i>Rudbeckia hirta</i>	black-eyed Susan	X	X	X		X	X	X	X		
<i>Rudbeckia laciniata</i>	cut-leaved coneflower	X	X	X		X	X		X	X	
<i>Rudbeckia triloba</i>	three-lobed coneflower	X	X			X			X		
<i>Sagittaria latifolia</i>	duck-potato, arrowhead		X	X			X				X
<i>Sage lyrata</i>	lyre-leaved sage			X			X	X	X		
<i>Salvia urticifolia</i>	nettle-leaved sage	X	X			X	X	X	X		
<i>Sanguinaria canadensis</i>	bloodroot	X	X	X	X				X		
<i>Saururus cernuus</i>	lizard's-tail		X	X	X	X	X				X
<i>Saxifraga virginiana</i>	early saxifrage		X		X	X		X	X		
<i>Sedum ternatum</i>	wild stonecrop	X	X		X	X			X		
<i>Silene stellata</i>	starry campion	X	X		X				X		
<i>Silene virginica</i>	fire pink	X	X			X		X	X		
<i>Silphium compositum</i>	rosin-weed	X	X	X		X	X	X			
<i>Silphium dentatum</i>	starry rosin-weed		X			X		X			
<i>Smilacina racemosa</i>	false Solomon's-seal	X	X	X	X	X			X		
<i>Solidago caesia</i>	bluestem goldenrod		X		X	X			X		
<i>Solidago odora</i>	sweet goldenrod		X	X		X	X	X			
<i>Solidago pinetorum</i>	pinewoods goldenrod		X	X		X	X	X			
<i>Solidago puberula</i>	downy goldenrod	X	X	X			X		X	X	
<i>Solidago rugosa</i>	rough-stemmed goldenrod	X	X	X		X	X		X		

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Solidago sempervirens</i>	seaside goldenrod			X		X	X			X	X
<i>Thalictrum dioicum</i>	early meadowrue	X	X		X				X		
<i>Tiarella cordifolia</i> var. <i>collina</i>	clumping foamflower	X	X		X				X		
<i>Tiarella cordifolia</i>	spreading foamflower	X			X				X		
<i>Trillium cuneatum</i>	little sweet Betsy	X			X				X		
<i>Trillium erectum</i>	wake robin	X			X				X		
<i>Trillium grandiflorum</i>	large-flowered trillium	X			X				X		
<i>Uvularia grandiflora</i>	large-flowered bellwort	X			X				X		
<i>Vernonia noveboracensis</i>	New York ironweed	X	X	X		X	X			X	
<i>Veronicastrum virginicum</i>	Culver's root	X				X	X		X	X	
<i>Viola cucullata</i>	marsh blue violet	X				X	X			X	
<i>Viola eriocarpa</i>	yellow violet		X		X	X			X		
<i>Viola pedata</i>	bird's-foot violet	X	X	X		X	X	X			
<i>Yucca filamentosa</i>	common yucca, beargrass	X	X	X		X	X	X			
<i>Zephranthes atamasco</i>	Atamasco lily		X	X		X	X		X	X	
<b>Ferns</b>											
<i>Adiantum pedatum</i>	maidenhair fern	X			X				X		
<i>Asplenium platyneuron</i>	ebony spleenwort	X	X	X	X	X			X		
<i>Athyrium asplenoides</i>	Southern lady fern	X	X	X	X				X	X	
<i>Botrychium virginianum</i>	rattlesnake fern	X	X	X	X	X		X	X	X	

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Dennstaedtia punctilobula</i>	hay-scented fern	X				X	X	X	X		
<i>Dryopteris intermedia</i>	fancy fern	X			X	X			X		
<i>Dryopteris marginalis</i>	marginal shield-fern	X	X		X	X			X		
<i>Onoclea sensibilis</i>	sensitive fern	X	X	X		X	X		X	X	
<i>Osmunda cinnamomea</i>	cinnamon fern	X	X	X	X	X			X	X	
<i>Osmunda regalis</i>	royal fern	X	X	X	X	X			X	X	
<i>Polystichum acrostichoides</i>	Christmas fern	X	X	X	X	X		X	X		
<i>Pteridium aquilinum</i>	bracken fern	X	X	X		X		X	X		
<i>Thelypteris palustris</i>	marsh fern	X	X	X		X	X			X	
<i>Woodwardia areolata</i>	netted chain fern	X	X	X	X	X			X	X	
<i>Woodwardia virginica</i>	Virginia chain fern		X	X	X	X	X		X	X	
<b>Grasses, Sedges, and Rushes</b>											
<i>Agrostis perennans</i>	autumn bentgrass	X	X	X	X	X	X	X	X	X	
<i>Andropogon gerardii</i>	big bluestem	X	X	X		X	X	X	X		
<i>Andropogon virginicus</i>	broomsedge	X	X	X		X	X	X	X	X	
<i>Arundinaria gigantea</i>	giant cane	X	X	X	X	X	X	X	X	X	
<i>Carex crinita</i>	long hair sedge		X	X		X	X		X	X	
<i>Carex lurida</i>	sallow sedge	X	X	X		X	X			X	X
<i>Carex pensylvanica</i>	Pennsylvania sedge	X	X		X	X	X	X	X		
<i>Carex plantaginea</i>	plantain-leaved sedge	X	X		X				X		

Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<i>Carex stricta</i>	tussock sedge	X	X	X		X	X			X	X
<i>Chasmanthium latifolium</i>	river oats	X	X	X	X	X	X		X	X	
<i>Danthonia sericea</i>	silky oatgrass		X	X		X	X	X	X		
<i>Danthonia spicata</i>	poverty oatgrass	X	X	X	X	X	X	X	X		
<i>Dulichium arundinaceum</i>	dwarf bamboo	X	X	X		X	X				X
<i>Hystrix patula</i>	bottlebrush grass	X	X		X	X	X	X	X		
<i>Elymus virginicus</i>	Virginia wild rye	X	X	X	X	X		X	X		
<i>Festuca rubra</i>	red fescue	X	X	X		X	X	X	X		
<i>Juncus effusus</i>	soft rush	X	X	X		X	X			X	X
<i>Leersia oryzoides</i>	rice cutgrass	X	X	X		X	X			X	X
<i>Panicum virgatum</i>	switch grass			X		X	X	X	X	X	
<i>Erianthus giganteus</i>	giant plumegrass		X	X		X	X		X	X	
<i>Schizachyrium scoparium</i>	little bluestem	X	X	X		X	X	X	X		
<i>Scirpus cyperinus</i>	woolgrass	X	X	X		X	X			X	X
<i>Sorghastrum nutans</i>	Indian grass	X	X	X		X	X	X	X		
<i>Sparganium americanum</i>	American bur-reed	X		X		X	X				X
<i>Tridens flavus</i>	purple top	X	X	X		X	X	X	X		
<i>Tripsacum dactyloides</i>	gama grass	X	X	X		X	X		X	X	
<i>Typha latifolia</i>	broad-leaved cattail	X	X	X			X			X	X
<i>Zizania aquatica</i>	wild rice			X			X				X



Scientific Name	Common Name	Region			Light			Moisture			
		M	P	C	S	P	F	L	M	H	A
<b>Ground covers</b>											
<i>Aster divaricatus</i>	white wood aster	X	X		X	X	X	X	X		
<i>Chrysogomum virginianum</i>	green-and-gold		X	X	X	X			X		
<i>Coreopsis verticillata</i>	threadleaf coreopsis		X	X		X	X	X			
<i>Demstaedtia punctilobula</i>	hayscented fern	X	X			X	X	X	X		
<i>Dicentra eximia</i>	wild bleeding heart	X			X	X		X	X		
<i>Fragaria virginiana</i>	wild strawberry	X	X				X	X	X		
<i>Leucothoe fontanesiana</i>	dog-hobble	X	X		X				X		
<i>Mitchella repens</i>	partridgeberry	X	X	X	X	X		X	X		
<i>Podophyllum peltatum</i>	mayapple	X	X	X	X	X			X		
<i>Smilacina racemosa</i>	false Solomon's seal	X	X	X	X	X			X		
<i>Thelypteris hexagonoptera</i>	beech fern	X	X	X	X	X		X	X		
<i>Tiarella cordifolia</i>	spreading foamflower	X			X	X			X		
<i>Vaccinium vacillans</i>	low sweet blueberry	X	X		X	X		X			
<i>Vitis rotundifolia</i> *	muscadine grape	X	X	X	X	X	X	X	X		
<i>Woodwardia areolata</i>	netted chainfern	X	X	X	X	X			X	X	
<i>Woodwardia virginica</i>	Virginia chain fern			X	X	X	X		X	X	

\* This species can exhibit invasive characteristics. Please contact the Resource Management Program before planting this species.

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## 9.0 ROLES AND RESPONSIBILITIES

### 9.1 Superintendent of State Parks

The Superintendent of State Parks is responsible for the administration of the Planting Guidelines.

### 9.2 Park Superintendents

Park superintendents are responsible for preventing the introduction of invasive exotic plants into park boundaries to the greatest extent possible. They share responsibility with the Resource Management Program for final approval of plants and seeds that are planted in the parks.

### 9.3 Resource Management Program

Staff of the Resource Management Program are available to provide technical assistance on plants and seeds that are appropriate to plant in a particular locality and park. They share responsibility with the park superintendent for final approval of any plants and seeds that are planted in a park.

### 9.4 Construction Program

Staff of the Construction Program are responsible for ensuring that only plants and seeds listed in these guidelines are included in the specifications for seeding and landscaping at new facilities as well as any other type of project involving soil stabilization such as roads.

## Glossary

allelopathy -	the process in which a plant releases into the environment a chemical compound which inhibits the growth of another plant in the same area.
annual -	completing the life cycle in one growing season.
cool season grasses -	grasses that germinate in the fall or early spring. They generally germinate quickly and are often useful for soil stabilization.
perennial -	a plant lasting for 3 or more years.
rhizomatous -	reproduction by horizontal roots, often resulting in a colony of plants.
rhizome -	an elongated, underground root which usually grows horizontally.
warm season grasses -	grasses that germinate when soil temperatures are at least 55° F. Warm season grasses usually grow slowly and are used more for aesthetic and ecological reasons rather than prompt stabilization of soil.